ABSTRACT

TITLE: GROSS ANATOMICAL STUDY ON THE SUPERIOR LARYNGEAL NERVE AND ITS EXTERNAL LARYNGEAL BRANCH: TOPOGRAPHICAL DISTRIBUTION OF THEIR COURSE AND CLINICAL IMPORTANCE

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INTRODUCTION:

The superior laryngeal nerve is the first branch of vagus nerve other than communicants. It originates at the level of C2 vertebra. It runs inferiorly and dorsally to internal carotid artery and internal jugular vein just above the bifurcation of common carotid it divides in to two terminal branches namely external branch of superior laryngeal nerve and internal branch of superior laryngeal nerve. Both supply the larynx to bring about the good quality of voice.

AIMS AND OBJECTIVES:

The aim of the study to emphasize the importance of external laryngeal nerve and its role invoice production and to give the surgical land marks for the successful thyroidectomy without affecting the voice.

MATERIALS AND METHODS:

Dissection method is used.

Material used:

1. 50 mid sagittal section of head and neck from the embalmed cadaver
2. Measuring Tape
3. Vernier caliper
4. Dissection set

RESULTS:

In the present study, in all the 50 specimen, the superior laryngeal nerve originated at the level of C2 transverse process. It is measured between 1.5 to 2.3 cm. The Internal laryngeal nerve originated at the lever greater horn of hyoid and pierced the foramen thyroidea in thyrohyoid membrane the distance is between 3.5 to 4 cm. The external laryngeal nerve length is between 6.2 to 7.4 cm. Then the external laryngeal intersection with superior thyroid artery in relation to the superior pole of the thyroid, in 72% of specimen the nerves crosses the superior thyroid artery at above 1 cm, in 22% specimen the nerve crosses the superior thyroid artery at 1 cm and in 6% specimen, the nerve crosses the superior thyroid artery at the level of superior thyroid pole or less than 1 cm from superior pole of thyroid. The other finding is insertion of external laryngeal nerve in the upper border of cricothyroid is 72%, in the lower border is 12% and remaining 16% is insertion at inferior constrictor and its relation to inferior constrictor and cricothyroid are in 84% the nerve runs anterior to inferior constrictor and in 16% it pierces the inferior

constrictor.The external laryngeal nerve gives neural twig to thyroid gland in 56% of present study.

CONCLUSION:

The present study is conducted to elaborate the gross anatomy of superior laryngeal nerve and its branch external laryngeal nerve and to note their commonly occurring variations. This nerve is very important for the professional users of voice like singers, teaches and lawyers etc., Hence this nerve cannot be neglected during surgery. This study will help the general surgeon, ENT surgeon and Neurosurgeon for surgical landmarks.

Key Words:

Superior laryngeal nerve, External laryngeal nerve, Internal laryngeal nerve, superior thyroid artery, Cricothyroid muscle, inferior constrictor muscle and thyroid gland.